CLAIMS

What is claimed is:

1. An apparatus, comprising:
a controller;
a hybrid switching element suitable for interpreting network data received from a networking device and storage data received from a storage device;
a protocol accelerator suitable for utilizing a data storage addressing scheme; and
an error control component suitable for compensating for loss of at least one of a network element and a data storage element;
wherein the error control component is communicatively coupled to the hybrid switching element, protocol accelerator and controller so as to enable error control coding including network and data storage.

2. The apparatus as described in claim 1, wherein data is addressed utilizing a 128 bit addressing scheme.

3. The apparatus as described in claim 2, wherein the addressing scheme is at least one of IPv6 and IPv4.

4. The apparatus as described in claim 1, wherein error coding of a network includes a network element.

5. The apparatus as described in claim 4, wherein the network element includes at least one of a communication link, switch, router, transmission link and interconnect module.

6. The apparatus as described in claim 1, wherein error coding of data storage includes a data storage element.

7. The apparatus as described in claim 6, wherein the data storage element includes at least one of a storage device and a disk array.

8. The apparatus as described in claim 1, wherein the protocol accelerator is suitable for increasing throughput of at least one of IPv6 and IPv4 Internet protocols.

9. The apparatus as described in claim 1, wherein error control provided by the error control component is extended over failure points of a network, the failure points including at least one of communication link, switch, router, transmission link, interconnect module, storage device and processor.

10. The apparatus as described in claim 9, wherein the network includes at least one of Internet, Internet 2 and isochronous data transfer network.

11. A storage area network (SAN) processor suitable for providing inter-network storage disposed between a storage device and a network, comprising:

a storage controller;

a network input/output interface suitable for coupling to a network to provide a network connection;

a storage device input/output interface suitable for coupling to a storage device;

a hybrid switching element suitable for interpreting network data received from a networking device and storage data received from a storage device;

a protocol accelerator suitable for utilizing a data storage addressing scheme; and

an error control component suitable for compensating for loss of at least one of a network element and a data storage element;

wherein the error control component is communicatively coupled to the hybrid switching element, protocol accelerator and storage controller so as to enable error control coding suitable for describing a data storage element and a network element accessible to the storage area network (SAN) processor.

12. The storage area network (SAN) processor as described in claim 11, wherein data is addressed utilizing a 128 bit addressing scheme.

13. The storage area network (SAN) processor as described in claim 12, wherein the addressing scheme is Ipv6.

14. The storage area network (SAN) processor as described in claim 11, wherein the network element includes at least one of a communication link, switch, router, transmission link and interconnect module.

15. The storage area network (SAN) processor as described in claim 11, wherein the data storage element includes at least one of a storage device and a disk array.

16. The storage area network (SAN) processor as described in claim 11, wherein the protocol accelerator is suitable for increasing throughput of at least one of IPv6 and IPv4 Internet protocols.

17. The storage area network (SAN) processor as described in claim 11, wherein error control provided by the error control component is extended over failure points of a network, the failure points including at least one of communication link, switch, router, transmission link, interconnect module, storage device and processor.

18. The storage area network (SAN) processor as described in claim 17, wherein the network includes at least one of Internet, Internet 2 and isochronous data transfer network.

19. A method of acquiring data, comprising:

receiving a request for storage data, the storage data available on a first storage device;

determining the storage data on the first storage device is unavailable by a hybrid switching element, the unavailability of the storage data caused by at least one of a network failure and a storage device failure;

delineating a path for obtaining the storage data, wherein the path is delineated by determining a communication pathway and redundant data address; and

acquiring data based on the delineated path.

20. The method as described in claim 19, wherein determining includes utilizing error control coding.

21. A storage area network (SAN) processor suitable for providing inter-network storage disposed between a storage device and a network, comprising:

means for controlling storage;

means for interfacing with a network, the network interfacing means suitable for coupling to a network to provide a network connection;

means for interfacing with a storage device, the storage device interfacing means suitable for coupling to a storage device;

means for hybrid switching, the hybrid switching means suitable for interpreting network data received from a networking device and storage data received from a storage device;

means for accelerating a protocol, the protocol accelerator means suitable for utilizing a data storage addressing scheme; and

means for controlling errors, the error control means suitable for compensating for loss of at least one of a network element and a data storage element;

wherein the error control means is communicatively coupled to the hybrid switching means, protocol accelerator means and storage controller means so as to enable error control coding including at least two of communication links, switches, data storage and processors accessible to the SAN processor.

22. The storage area network (SAN) processor as described in claim 21, wherein data is addressed utilizing a 128 bit addressing scheme.

23. The storage area network (SAN) processor as described in claim 22, wherein the addressing scheme is at least one of IPv6 and IPv4.

24. The storage area network (SAN) processor as described in claim 21, wherein the network element includes at least one of a communication link, switch, router, transmission link and interconnect module.

25. The storage area network (SAN) processor as described in claim 21, wherein the data storage element includes at least one of a storage device and a disk array.

26. The storage area network (SAN) processor as described in claim 21, wherein the protocol accelerator is suitable for increasing throughput of at least one of IPv6 and IPv4 Internet protocols.

27. The storage area network (SAN) processor as described in claim 21, wherein error control provided by the error control component is extended over failure points of a network, the failure points including at least one of communication link, switch, router, transmission link, interconnect module, storage device and processor.

28. The storage area network (SAN) processor as described in claim 27, wherein the network includes at least one of Internet, Internet 2 and isochronous data transfer network.

29. An inter-networked storage system, comprising:

a network suitable for transmitting electronic data;

a first node communicatively coupled to the network, the first node including

a storage device suitable for storing electronic data; and

a storage/network processor coupled to the storage device, the storage/network processor including

a hybrid switching element suitable for interpreting network data received from a networking device and storage data received from a storage device;

an addressing component suitable for addressing data in a format suitable for storage across the network; and

an error control component suitable for compensating for loss of at least one of a network element and a data storage element;

and

a second node communicatively coupled to the first node over the network, the second node including

a storage device suitable for storing electronic data; and

a storage/network processor coupled to the storage device, the storage/network processor including

a hybrid switching element suitable for interpreting network data received from a networking device and storage data received from a storage device;

an addressing component suitable for addressing data in a format suitable for storage across the network; and

an error control component suitable for compensating for loss of at least one of a network element and a data storage element

wherein error control coding is provided suitable for describing network error data and data storage error data to enable the error control components to provide inter-networked storage over the first node and the second node.

30. The inter-networked storage system as described in claim 29, wherein the inter-networked storage includes data distributed over a plurality of nodes utilizing a 128 bit addressing scheme.

31. The inter-networked storage system as described in claim 30, wherein the addressing scheme is at least one of IPv6 and IPv4.

32. The inter-networked storage system as described in claim 29, wherein error coding of a network includes a network element.

33. The inter-networked storage system as described in claim 32, wherein the network element includes at least one of a communication link, switch, router, transmission link and interconnect module.

34. The inter-networked storage system as described in claim 29, wherein error coding of data storage includes a data storage element.

35. The inter-networked storage system as described in claim 34, wherein the data storage element includes at least one of a storage device and a disk array.

36. The inter-networked storage system as described in claim 29, wherein the protocol accelerator is suitable for increasing throughput of Ipv6 Internet protocol.

37. The inter-networked storage system as described in claim 29, wherein error control provided by the error control component is extended over failure points of a network, the failure points including at least one of communication link, switch, router, transmission link, interconnect module, storage device and processor.

38. The inter-networked storage system as described in claim 37, wherein the network includes at least one of Internet, Internet 2 and isochronous data transfer network.